

<https://helda.helsinki.fi>

Oil Cities in Africa : Beyond Just Transition

Obeng-Odoom, Franklin

2021-03

Obeng-Odoom , F 2021 , ' Oil Cities in Africa : Beyond Just Transition ' , American Journal of Economics and Sociology , vol. 80 , no. 2 , pp. 777-821 . <https://doi.org/10.1111/ajes.12390>

<http://hdl.handle.net/10138/332519>

<https://doi.org/10.1111/ajes.12390>

cc_by

publishedVersion

Downloaded from Helda, University of Helsinki institutional repository.

This is an electronic reprint of the original article.

This reprint may differ from the original in pagination and typographic detail.

Please cite the original version.

Oil Cities in Africa: Beyond Just Transition

By FRANKLIN OBENG-ODOOM*

ABSTRACT. Nations and NGOs are promoting the idea of a transition from a petroleum-based civilization to one fueled by renewable energy. But there are many questions about how to proceed. The solution usually proposed is to develop “clean energy” as the underlying basis of a transition. Analysts tend to be concerned with climate change and land use change, with a focus on technical developments. Socio-ecological issues receive scant attention, especially if they relate to oil cities. This article starts from the perspective that progress in saving the planet from destruction can only be achieved by taking seriously past and present injustices and taking measures to rectify them. I use the situation in Port Harcourt, Nigeria to illustrate this proposition. I focus on three interrelated concepts: rent theft, social costs, and just transition. The central problem is rent theft because it is at the root of the “crime of poverty” and the social costs of plundering the land for energy sources. Until they address *problems arising from historical injustice*, campaigns for a just transition that promote clean energy in a bioeconomy will merely reproduce the central problem. Thus, reparations and land equity must be an integral part of any solution.

The Fossil Fuel Question

Oil cities and coal towns around the world have an ambiguous reputation. As centers of production of the fuels that have been the engine of economic development, they are viewed as being necessary. But as focal points of the desire to create a “clean and green” world, they are considered an affront to ecological morality. Overcoming their history as sources of blight and transforming them into centers of healthy

*Associate professor of sustainability science, Global Development Studies and Helsinki Institute of Sustainability Science, University of Helsinki, Finland. Ph.D. (political economy), University of Sydney, Australia. Recent books: *Property, Institutions, and Social Stratification in Africa* (Cambridge University Press 2020) and *The Commons in an Age of Uncertainty* (University of Toronto Press 2021). Recipient of the Kapp Prize for research in ecological political economy. Email: franklin.obeng-odoom@helsinki.fi

American Journal of Economics and Sociology, Vol. 80, No. 2 (March, 2021).

DOI: 10.1111/ajes.12390

© 2021 The Authors. The *American Journal of Economics and Sociology* published by Wiley Periodicals LLC on behalf of American Journal of Economics and Sociology, Inc.

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited.

production is now the objective. The need for ecological transformation of cities, towns, and regions seems to be intuitive (Watts and Kashi 2011; Economist 2020b). Some have formulated the task in terms of simply wishing away an enormous problem by “making oil cities history.” A deeper analysis is required. Systematic and detailed research shows that the nature of such cities, the form of transition, and the ramifications of the proposed transition need to be revisited because they do not reflect an understanding of the history of those cities (Pratt et al. 2014; Marais et al. 2021).

Three questions arise about the political economy of an equitable transition. First, how can urban economists theorize the relationship between fossil fuels and the economy by focusing on cities? Second, in what ways does the oil industry shape urban outcomes? Third, what other alternatives could be developed beyond the existing simplistic focus on making oil cities history?

The attempts to address such questions have been numerous. The resource curse literature in its various forms is voluminous, as many analysts have noted (Obi 2009; Obeng-Odoom 2014, 2018; Andrews and Siakwah 2021). Marxian alternatives have also been put forward (Nwoke 1984a, 1984b, 1986; Fine and Rustonjee 1996). However, these frameworks do not systematically consider urban land in time and space (Obeng-Odoom 2010a, 2014).

This neglect reflects Anne Haila’s (2016) wider critique that neither orthodox nor critical urban scholarship pays systematic attention to the land question. Georgist political economists make a similar argument about the literature on sustainability (Gaffney 2016; Obeng-Odoom 2021). In that vein, Haila created and taught a course at the University of Helsinki on “The Land Question and Sustainable Urban Development.”

Past efforts to develop a theoretical understanding of the role of land in achieving sustainable cities can be extended in three ways (Obeng-Odoom 2021). First, work has already begun on developing a holistic theory that makes land central to nature, not separate from it, such that ecologically detached “social relations” in space are re-constructed as “socio-ecological relations and processes” (Haila 2011, 2016: xxi). The second step involves moving beyond the tendency to view land and sustainability as multidimensional. We should consider

sustainability as intersectional at least and indivisible at best. Above all, we should ground the analysis of land and sustainability on the concept of rent theft. Third, researching oil cities in this way could help to understand the braided links between the body, motion, and value of oil energy (Mirowski 1989: 99–138; Schobert 2014: 8–9). That will help us understand not just space, but also time because fossil fuel is linked to urban transport. Studying location and time in relation to the way cities are shaped by fossil fuels is one way of reconstructing urban economics (Obeng-Odoom 2014, 2016).

This article draws on the interrelated concepts of rent theft, social costs, and the just distribution and use of land. It also uses data from oil cities in Africa, notably Port Harcourt in Nigeria. Those sources are the basis of my argument that rent theft is the central cause of urban inequalities, social stratification, and social costs from oil extraction. Without addressing the land question, just-transition campaigns that promote land use change in the form of bioeconomy, circular economy, renewables, and clean energy will merely reproduce the central problem.

The rest of this article is divided into five sections. The section on “rent theft” shows how the private appropriation of socially created rents generates concentrated growth, with persistent inequalities, social stratification, and socio-ecological crises. The section on “slaves, coal, and oil in the city” provides the historical context for rent theft in Port Harcourt, Nigeria. The section entitled “the crime of poverty” shows the paradoxical coexistence of prosperity and privation, driven by specific property relations. The treatment of “social costs” discusses the ecocide of rent theft. Finally, in a section on just transition and land equity, I look at the story of Port Harcourt as a way to understand concretely how the transition to a post-oil economy might occur and how it might affect an urban economy.

Rent Theft

As a concept in political economy, rent theft is distinct from the public choice concept of rent-seeking, which refers to the misuse of a political system to gain advantage for a select number of people by changing relative prices, such as pre- and post-tariff prices (Krueger 1974;

Haila 2016: 121–123). By contrast, rent theft is related to the private appropriation of socially created land rent (Obeng-Odoom 2021: 204–205). Rent always amounts to some form of unearned income, but the rent created by government regulations, as discussed in the public choice literature, is an order of magnitude smaller than the rent created by nature and by social interaction in the form of land values and the value of oil in situ. Analyzing rent theft requires an exposition of the historical context of the oil industry. As suggested by Cyrus Bina (1992), such an analysis can neither be handled within the neoclassical nor the Ricardian traditions. The Marxian alternative has, to date, been the dominant approach to addressing the relationship of rent to the fossil fuel economy (Nwoke 1984a, 1984b, 1986; Bina 1992; Fine 2019). Marxist analysis is also inadequate because it does not develop rent theft as a specific category.

Georgist land economics offers a more promising pathway, even if “rent theft” per se is not developed within George’s work. Theorizing rent theft must be based on an analysis of how urban landownership has been transformed in space and time, taking into account the wider context under which such relations have changed. The exposition of the ongoing effects of the transformation of property relations must be central to these analyses. In Nigeria, Akinlawon Mabogunje (2013: 621–652), the country’s most prominent urban scholar, has provided an overview of the landownership structure that can be used to analyze landed-property relations in Port Harcourt. Landownership in Port Harcourt is vested in the governor of Rivers State. Under this grand landlord are many “smaller” private landlords and customary users of land. As a grand landlord, the governor has historically granted transnational oil corporations the authority to lead the process of development, often to the detriment of residents who claim a customary interest in land. A 1991 Supreme Court ruling affirmed the long-term right of people to the land in their village or region (Mabogunje 2013: 637–638). However, according to the Land Use Act of 1978, the governor, often a representative of the federal government, has to approve the use of land. The governor can also exercise the power of compulsory acquisition. Thus, while the rights of ordinary people to land are

guaranteed in principle, in practice a powerful state, strongly aligned with oil interests, controls the use of land for oil-led development.

This land use ownership structure reflects a longstanding colonial logic. An all-knowing colonial state was responsible for development. Lower-level chiefs could participate in the system by concentrating on their local areas, but if there were conflicts, the final decision rested with the colonial state. Prior to British colonialism, the Nigerian land tenure system was customary. Living off the land, Nigerians did not seek to extract rent nor reinvest the surplus of their production. When there was sufficient production, those who worked the land relied on how much they had produced. When they had excess, they rested.

In the current system, however, federal leaders extract rents from subnational oil cities, only to return a modicum to where the resources were generated. Federal leaders can punish perceived insubordination by cities, towns, or regions with systematic underinvestment (Archibong 2018). State governments are both complicit and victims: complicit because they also are rent-extracting, but victims because they, too, are subject to federal power. The governor, the head of the state system, is complicit by being entrusted with landownership in the state. On a larger scale, the Nigerian federal state is a victim. Its power is curtailed by transnational corporations (TNCs) and by British, U.S., and other Western interests. So, rents that arise from nature and society in Port Harcourt have typically accrued to landlords at one scale or another.

The longer this system persists the more entrenched it becomes. Processes of “circular and cumulative causation” help to explain this outcome (Myrdal 1944). So do the economic concepts of increasing returns to scale and economic stickiness (Archibong 2018). As rents have increased, TNCs have become more powerful, and they have extracted more rents. Similarly, the stronger federal powers become, the more rent they can extract. Even if they invest some capital back into oil cities, they still extract even more rents. There is progress, but it produces and persists alongside poverty.

Henry George (1885) described these contradictions some time ago as the “crime of poverty,” a process by which the private appropriation

of rent enslaves the poor to landlords. The wages of laborers are hostage to the wishes of landlords because the exaction of land rent takes away the surpluses that workers might otherwise accumulate and invest to gain economic independence. Incentives for hard work can be killed in this process, too. War, hunger, disease, and crime all stem from the control of land. The power of landlords to extract rent makes them masters, and the workers remain at the level of slaves.

Slaves, Coal, and Oil in the City

Arguably, Port Harcourt in Nigeria is the epicenter of the process that Henry George ([1879] 1935) observed, by which economic advance (“progress”) raises the potential for rent extraction that oppresses workers (“poverty”). The city stands out in both grandeur and glamour, but it was built on years of slavery that substantially helped British industrial development and commercial interests (Northrup 1978, 2007; Afigbo 2006; Izeogu 2018). British actions and inactions enabled slavery to continue for at least 100 years after the “official” end of slavery. After the slave trade drained the Niger Delta of its strong labor force (the people removed) and of the rich, uncompensated labor of the workers who remained, Britain led a new “legitimate trade” regime in which British interest was paramount.

Britain systematically undermined self-sustaining subsistence agriculture in favor of indigenous cultivation of cash crops such as palm, which helped Britain’s industrial development because palm oil was needed to produce the detergent that was needed for cleaning grease (Northrup 1978, 2007; Afigbo 2006; Izeogu 2018). Coal, discovered in the Niger Delta area in 1906, was also exported to Britain to satisfy British industrial needs, but Britain’s reliance on coal later declined.¹ From 1925 to 1944, port facilities and general commerce became the key economic function of Port Harcourt, although the port continued to support the coal industry. Like earlier trade regimes, the new trade system disproportionately benefited Britain:

Colonial administrations could finance themselves adequately, mainly by taxing international trade. Levies on imports and exports were the main single source of colonial government revenue. (Moore et al. 2018: 21)

Of course, the transformation of the city also generated internal growth and change. Agglomeration economies played a critical role in this internal restructuring. For example, the Port Harcourt market, which was established in 1928, offered the advantages of information and trade (Izeogu and Salau 1985). Transportation economies also played a significant role in the economic development of the city. One example is the relationship between transportation and tin mining in the Jos Plateau:

Before the railway got to the Jos Plateau, the journey from the tin mines to the coast took 35 days and cost £29.10s a ton. With a connection to the coast at Port Harcourt in 1927, not only was the journey reduced to less than 35 hours, but the cost came down to £8 per ton, while exports rose from 10,926 tons in 1927 to 13,069 in 1928. (Mabogunje 1965: 420)

The volume of cargo in Port Harcourt more than doubled between 1918 and 1923 (ignoring coal and railway materials). Imports rose 117 percent, and exports increased 214 percent (Olokoju 1996: 123, Table 4).

Not only did this transport of cargo reduce transaction costs in Nigeria and other countries, the volume of trade via the port also significantly supported the fossil fuel industry. The port carried 410,543 tons of coal between 1917 and 1920 (Olokoju 1996: 109). That is an example of how coal substantially helped to increase the economic base of the city, including during the Second World War from 1939 to 1945. During this time, many soldiers from Port Harcourt also fought in the war on the British side. Njoku (1981) shows that the Niger Delta, which accounted for some 75 percent of oil palm cultivation in Nigeria, provided a steady and substantial export of palm oil and palm kernel to Britain and other countries to make up for the shortfall of petroleum. By 1941, Nigerian "Win the War" funds had raised £12,000, and some 16,000 men had enlisted or been forced to enlist in the army to support the British war effort.

Neither the expected increases in farmer prices nor promises to ex-servicemen were systematically honored by Britain after the war. There was post-World War II urban and national rebuilding, and this was done through deliberate state intervention. For example,

infrastructure and various administrative facilities were concentrated in Port Harcourt (Jaja 2009: 118). However, like the road and rail networks constructed by the colonial government of Nigeria, “state intervention” in Port Harcourt facilitated the extraction of resources from the hinterland to be transported to Britain.

Historically, rents socially produced but privately appropriated by the British colonial state and British landlords from so-called crown lands in Port Harcourt were early features of colonial domination (Wolpe 1974: 107–108). In modern Port Harcourt, these issues have metastasized into a smorgasbord of concerns (Iwilade 2014).

All along, the British colonizers of Nigeria purported to be using a so-called indirect rule system. Theoretically, indirect rule consisted of allowing home rule under local customary authority, but in practice, the British administration used a tier of governance it had created itself and packed with its own officers to control the customary system for the purpose of colonial development. Thus, “indirect rule” was direct in terms of its palpable control through its supervisory power over the local system of self-governance. It was direct in three other respects. First, the British transformed the land tenure system. They did this by appointing chiefs where there had been none, by installing those who would support British interests, and by making customary land administration dependent on central government structures (Afigbo 1972; Berry 1992). Second, the British imposed a land tax with the aim of forcing Nigerians to work, even when they had produced enough to satisfy domestic needs. The land tax meant that people needed to work continuously to have extra money to pay the British land tax (Forstater 2005). Third, as argued by Rita Kiki Edozie (2017), indigenous capital was subordinated to foreign capital, as land, labor, capital, and the state in Nigeria were all restructured to support British interests.

Many African leaders consistently challenged this rule. The British colonists responded to this resistance by exiling such leaders, underinvesting in their regions, undermining their legitimate leadership, or simply assassinating these indigenous leaders (Afigbo 1972; Archibong 2018: 330). Resistance continued, nevertheless, but at very serious cost to the leaders and their cities and regions. Eventually, however, Nigeria obtained its political independence from Britain in 1960.

The post-independence era was expected to be radically different. Yet, in post-colonial “Nigeria, these federal regimes took on the identity of the British colonial autocrats from about 1885 to 1960 in the first period, and military postcolonial autocrats from 1966 to 1999 in the second period” (Archibong 2018: 331). In essence, the administrators were Nigerian, but the system was largely British. The Nigerian state tottered as it grappled with this legacy of colonialism. Coups broke out in which several military leaders sought to address inherited and imposed contradictions.

During the 1967–1970 Nigerian Civil War, resistance to the violent neocolonialism of the Nigerian central government was framed as a “civil war” about secession related to the Biafra area. Many economic activities in Port Harcourt were moved away to other cities during this tumultuous period (Izeogu 2018: 116). The disproportionate control of oil resources by the Nigerian federal state and its imperial “partners” was a key part of the concerns of the secessionists, who felt that the people of the Niger Delta area had been historically marginalized in spite of the region’s substantial contribution to the rest of the Nigerian federation (Obi 2009: 115). One concrete concern was the loss of the distribution principle by which various regions in Nigeria received revenues proportionate to what they contributed. This was suddenly replaced by a new principle of sharing resources based on the size of population and need. For the secessionists, this sudden switch in principle instantly disadvantaged ethnic minorities in the Niger Delta area who also bore the greatest brunt of social costs from oil, commercial agriculture, and years of slavery.

The secessionists lost the war. Analysis of U.S. policy in Africa at the time of the war shows that, while claiming neutrality, the United States provided humanitarian relief to civilians who were suffering in Biafra but supported the Nigerian federal government’s position of centralizing authority (Cohen 2020: 81–89). France, on the other hand, provided some support to the Biafrans, arguably because of its long-term interest to have a weaker federated Nigeria (Cohen 2020: 88). France also wanted to obtain a sizeable share of oil for itself through its national oil company, Elf-ERAP. As noted on the pages of *Présence Africaine*: “The prospect of monopolizing Biafra’s oil wealth made France ... the secessionist State’s staunchest ally” (Feuser 1986: 120). In

this scramble for Nigeria, in which France dreamed of making the Gulf of Guinea a French oil lake, Britain took the side of a united Nigeria to continue as the overall beneficiary of the Nigerian oil industry, in which Shell BP played a controlling role, to avoid having to pay any taxes to a new Biafran government. In addition, Britain supported the Nigerian centralized system in order to prevent British companies from having to pay more royalties, which was a key demand of the Biafran leaders (Obi 2009: 115). The war, then, was not “civil.” Rather, it was a conflict not just about resources but also about the way land had been misused to entrench social stratification and persistent inequality.

By the end of the war in 1970, oil had become even more important. Much of this change in the power of oil could be linked to the rising price of oil and the growing dependence of the world on it (NNPC 2020). With popular and official discontent over the inability of the private sector to drive national economic change, and with growing satisfaction about the upswing of the oil market, the national managers of the Nigerian economy turned the oil industry into an instrument of state-led reconstruction, transformation, and independent development, particularly between 1975 and 1980 (Adésinà 2012: 293). The headquarters of Shell-BP, the largest oil producer in Nigeria, was located in Port Harcourt. The city and its environs became both the source and the base for Nigeria’s petrochemical industry (Izeogu and Salau 1985). With Port Harcourt becoming the key point of the import and export of oil and petroleum products (Izeogu and Salau 1985), its port was also transformed into a specialized revolving door for oil and petroleum trade (Jaja 2009). Systematic evidence compiled by Adésinà (2012: 294–306) shows that, during this time, the Port Harcourt economy diversified: the share of agriculture in the GDP fell from 31.2 percent to 19.9 percent, while the manufacturing share increased from 3.3 percent to 8.1 percent. GNI per capita surged from around US\$300 to US\$600, too. Almost all industries in Port Harcourt were flourishing around this time, particularly textiles, cloth, and leather, fabricated metal products, repair services, and chemical products (including petroleum) (Izeogu and Salau 1985: Table 1).

Not only was there prosperity in Port Harcourt, the city became the center of the economic boom in Nigeria, reflecting a deliberate policy to use the city as a driver of growth and change. Consider

manufacturing. After independence, Nigeria implemented policies in support of import-substitution industrialization (ISI), leading to the development of a strong manufacturing base. At one point in the 1980s, 8 out of 10 manufacturing industries in Rivers State could be found in Port Harcourt (Izeogu 1989: 61). Among these manufacturing industries were local oil refineries in Port Harcourt, the first of which was built in 1965 (Ogunsola 1990; Jesuleye et al. 2007; Ekpo 2014). Car assembly industries were built soon thereafter.

Volkswagen of Nigeria and Peugeot Automobile Nigeria were the two first assembly plants. By the end of 1975, the agreement to establish four other plants had been signed (Agbo 2011: 10). The industry was quite successful. Throughout the 1970s, “the Nigerian automobile industry had the capacity to assemble 108,000 cars, 56,000 commercial vehicles and 6,000 trucks per annum” (Ugwueze et al. 2020: 116). The symbiotic relationship between refineries producing fuel for cars and the increase in the number of cars in Port Harcourt is quite intuitive, possibly laying the groundwork for the linkages needed for further urban economic transformation. The share of manufacturing in real GDP increased from 4.73 in 1961 to 7.66 in 1970 (Chete et al. 2016: 4). So, ISI and industrial policy generally seemed to be working as planned.

However, this policy orientation, while producing the needed change, was deemed still in need of improvement. Nigerian scholars point to how Britain kept its interests guaranteed by carefully supporting Nigerian successors who were pro-British and, hence, pliable for imperial manipulation (Mabogunje 2013: 655–656). British institutions of land law remained. Indeed, they were strengthened further by designing new institutions in Britain to offer “technical assistance” and “training” to the new post-independence elites. The Department of Land Economy at Cambridge University was one such institution. Not only did it train a new cadre of land economists committed to maintaining the status quo, the department also created local educational institutions that trained estate managers to maintain the status quo and to guarantee British oil interests in Nigeria. D. R. Denman, the face of this land economy movement, was so influential in Nigeria that he was made a chief himself (Denman 1993: 237–252). That action symbolized the continuing influence of Britain in Nigeria, even

as Britain implemented so-called indigenization policies. So, import substitution industrialization (ISI) was significantly scaled up in 1971, when Nigeria's indigenization policy was passed, followed by a much stronger 1977 decree on indigenization. Both policies on indigenization led to the "Nigerianization" of the key sectors in the Nigerian economy (Edozie 2017: 61–62). So, Nigerians themselves increasingly began to occupy key leadership positions and participated in ongoing developmentalism—active state involvement to ensure economic growth and social development (Mabogunje 1980: 5).

The Land Use Act of 1978 was passed during this time. By entrusting land to appointed governors, the aim was to ensure a single-minded drive toward developmentalism (Agbosu 1988; Mabogunje 2013: 661). The Nigerian state used mineral rents to fund a strong social policy, as expected. Adésinà (2012: 294–306) shows that public education and healthcare flourished. Universal primary education was developed. Gross secondary school enrollment increased more than six times. The payment of university tuition fees was abolished. The quality of education also improved, as more teacher training colleges became a feature of professional teacher education. Healthcare provision expanded: not only did the per capita number of hospital beds increase, infant and under-five mortality rates declined. As the physical infrastructure greatly expanded, not only did the economy grow for a few, but also for the many. While there were policy mistakes, such as excessive control of public universities, overall both the economic and social well-being of Nigerians was greatly enhanced by oil-funded economic and social policy. This use of land and land rent by the federal state for social transformation, in essence, is what Anne Haila (2016), in another context, described as a "property state."

Yet criticisms of this model were pervasive and persistent. When these criticisms were not about a lack of economic growth, they centered on cynicism about whether the state could continue to be a driver of development, or how oil was fueling conflicts (Obi 2009). In general, state-led developmentalism had other problems (Chinwe 2014; Obeng-Odoom 2019, 2020b, 2021). They included an overcommitment to growth, insensitivity to ecological questions, neglect of social problems caused by rising land values being captured by private landlords, and favoritism of certain groups by the federal state under

the guise of indigenization and local contents policies. For example, fuel import licensing programs and policies granting oil concessions benefited specific power groups, both local and expatriate. Either way, the historical stratification in Nigeria persisted, leaving many in the Niger Delta area in unequal property relations. Those problems inhibited deep social inclusion, impeded the development of local oil refineries, and consequently forced Nigeria to remain dependent on oil imports.

Perhaps the shrewdest criticism was to attach the label “rent-seeking” to the state. This act of creative mislabeling deemed the state inherently corrupt and conflated private rent-seeking behavior with the public use of land rent for social transformation. In Africa, this corruption of concepts and constructs, carried out by academics, the media, and Western political powers and classes, coupled with real internal problems in oil states, propelled the market-based paradigm to new levels of acceptability (Obeng-Odoom 2020a, 2020b: 284–287). There was both scholarly and political pushback, for example, by C. N. Nwoke (1984a, 1984b, 1986) and the Movement for the Survival of Ogoni People (Obi 1997). However, such careful analyses of the historical precursors to and legacy of Nigerian developmentalism were systematically overlooked by market fundamentalists and Western interests. Joe Collins (2017: 150) has called this neglect of the evidence “scandalous.”

This scandalous evasion of the facts was not an isolated case. The market-led economy itself was ushered in through ideological and actual war and conflict. British influence, along with a wider Western interest, sought to curb the advance of so-called socialism. As has been briefly mentioned, the Nigerian state slowly disintegrated, wracked by coups, a civil war (1967–1970), and military rule (1966–1979). Since the 1980s, Nigerian political economy has witnessed a surge in appeals to the market as the new governing principle (Obi 2009; Adésinà 2012). Amid coups, counter-coups, and military rule, up until May 1999, when the country returned to democratic rule, the period was characterized by ongoing appeals to market-based ideas of “good governance.” In essence, this meant a concrete shift from policies favoring import substitution industrialization (ISI) and indigenization to policies favoring industrialization by the promotion of exports and the institutionalization of foreign investment (Ekpo 2014). Yet, the

rise of the private oil industry in such a tumultuous period of quasi-democratic rule contradicts the idea that the market is the guarantor of freedom. The conditions for the turn to markets also cast doubt on the claim that transnational corporations (TNCs), the paragons of markets, are the best vehicles for social and democratic transformation, as new institutional economists tend to claim. (For a discussion, see Obeng-Odoom [2018].)

Obi (1997, 2009, 2019a, 2019b) has shown that Shell BP siphons oil rents out of Nigeria. The company receives significant backing from the Nigerian state, including military support, favorable tax laws, and other helpful institutions. Yet, relative to the rents it extracts, Shell BP offers very limited reinvestment in the Niger Delta area. Instead, other parts of Nigeria, the homes of powerful British-backed Nigerian elites, benefit disproportionately. Local revenues are also channeled back into the Nigerian central state, which must apparently share the rents from oil nationally. So, absentee landowners emerge both nationally and internationally, while the conditions of local producers deteriorate. Opposition arises, but is quickly suppressed. Supporters of this system of accumulation are exalted and rewarded. Meanwhile, the long-term withdrawal of the state from its classic 1975–1980 developmentalism has meant that it cannot offer stable and decent employment.

Archibong (2018: 327) has documented how, politically, a three-tier governance structure has evolved from the long transformation in Nigeria. At the helm is the Federal Capital Territory, headquartered in Abuja. Next is the state government that exists in 36 states. Then there are some 774 local government areas at the base that are responsible for, among other things, governing cities and towns. Nigerian political economists typically argue that this system supports British and elite interests.

For Nigeria, the most distinguishing aspect of the historical development of this power-sharing arrangement is that the Nigerian national bourgeoisie had always operated as a junior partner in relation to the British colonial authorities and British finance capital before independence. This was also the relationship that the Nigerian bourgeoisie entered into in a postcolonial global system ... [that] the Euro-American metropolitan centers of world imperialism and their transnational corporations have dominated since independence. (Edozie 2017: 66)

A system of private involvement in governance percolates through this structure. For example, tax administration for the 36 states is sometimes outsourced to private companies (Moore et al. 2018: 117). Much has been written about “greed” in Nigerian politics (Collier 2009a, 2009b; Watts and Kashi 2011). That has led to a range of programs to improve efficiency, transparency and so-called good governance, which is apparently undermined by a “new scramble for Africa,” in which Chinese and Indian transnational oil corporations have become the new conveyor belts for rent-seeking (Economist 2019: 9, 18–20). Nigeria has swapped oil for infrastructure development with Chinese or Indian companies that do not require corresponding conditionalities for “good governance.” The reforms that have enabled those swaps have been the focus of significant and sustained criticisms. African leaders are accused of romanticizing the power of South-South solidarity. Nevertheless, there have been attempts by the African Union, among others, to Africanize Chinese engagement (Chen 2020: 52, 57). This has led many African scholars, such as Obi (2010) and Cline-Cole (2020), to strongly argue that the nuances of this Global South collaboration are misunderstood, even if this collaboration itself is nowhere near a panacea in its current forms.

Indeed, African unity is not systematically forged in a way to address the historic problem of rent theft, as research on the African Continental Free Trade Area agreement also suggests (Obeng-Odoom 2020c). But it is unwise to blame the most obvious sources of malfeasance until we have examined the forces that have generally escaped notice:

The inefficiency, extravagance and corruption which we commonly attribute to governmental management are mostly in those departments which do not come under the public eye, and little concern, if they concern at all, public convenience. (George [1883b] 1966: 186; see also George 1883a: 205)

If African nations have difficulty addressing the conditions that give rise to rent theft, we need to look for explanations. Instead of focusing on individuals, I focus on patterns that give rise to inequality and social stratification.

The Crime of Poverty

Poverty and long-term inequality in Port Harcourt have been persistent. Over half a century ago, some 90 percent of Port Harcourt residents earned less than £200 per person per annum, while less than 1 percent of the residents earned £500 or more. But those figures applied only to the 11 percent of the population with formal employment (Wolpe 1974: 27). Most people in the city could be described as the “working poor.” Similar inequalities characterized wealth ownership. As of 1964, 53 wealthy people owned 25 percent of the wealth. Of those 53, as many as 18 were expatriates (Wolpe 1974: 28).

Looking at conditions today, there is continuity between the pre- and post-colonial period, with serious implications for social cohesion. Socioeconomic disparities persist, whether compared to national averages in wages, housing, or sanitation standards. In one large survey involving 833 residents of Port Harcourt, about 30 percent earned less than the minimum household wage of \$120 per month (Nwokoro et al. 2015). Some 56 percent of the sampled households earned above the minimum wage but less than \$401, while only 8 percent of the sample earned more than \$400 per household per month. For households with an average size of six people, these wages are quite low, even if the profile of residents appears to be slightly better than in other cities such as Lagos, where some 67 percent of households earn less than the national minimum wage and only about 4 percent earn more than \$400 (Lawanson and Oduwaye 2014). Indeed, slums, poor health profiles, and widespread challenging sanitation conditions prevail in Port Harcourt.

The levels of poverty in Port Harcourt complicate the picture. As shown in Table 1, even though the number of people falling annually within the brackets of the poor has slowed down, the poverty gap—the additional income needed to lift the poor above the poverty line—has surged. As absolute poverty declines, relative poverty increases.

“Nigeria accounts for nearly 20% of continental GDP and about 75% of the West Africa economy” (African Development Bank 2019: 7, 169). Indeed, these figures underestimate the real size of the Nigerian economy because they exclude a vibrant informal economy, which is

Table 1
Poverty Levels in Nigeria (General Household Survey), 2010–2013

Scale	Poverty Head Count		Poverty Gap		Poverty Severity	
	2010/2011	2012/2013	2010/2011	2012/2013	2010/2011	2012/2013
Urban	15.8	12.6	12.9	13.1	5.2	5.3
South East	31.7	28.8	8.1	10.3	3.2	4.7
National	35.2	33.1	9.2	9.6	3.7	3.9

Source: World Bank (2016: 72).

often estimated to be much bigger than the formal economy (Meagher 2010; Lawanson and Oduwaye 2014; Nwokoro et al. 2015). Using the share of manufacturing in real GDP as a proxy for the size of the formal economy, it would appear that the formal economy has been shrinking. Between 1970 and 1981, the share of manufacturing dropped from 7.7 percent to 5.6 percent. By 2009, manufacturing had fallen to 3.7 percent (Chete et al. 2016: 4). As manufacturing work disappears, informal work becomes ubiquitous.

Meanwhile, the Nigerian oil-led economy continues to boom, a trend that will exacerbate the problem of inequality:

From 1980 to 2010, oil revenues contributed over three-quarters of the federal government's revenues, nearly 97 percent of total exports, and 35 percent of gross domestic product (GDP). (World Bank 2016: 1)

These national revenues arise from production of about 2.46 million barrels of oil per year, the sale of which yielded revenues around US\$231 billion between 1970 and 1999 (Obeng-Odoom 2010b). The centrality of River States—especially the Niger Delta—to the oil industry in Nigeria has been well-documented (Ukaga et al. 2012; Obi 2009, 2019a, 2019b). Regarded as the sixth largest oil exporter in the world, Nigeria is widely acclaimed as a petroleum superstar (Jesuleye et al. 2007: 1339). But the wealth does not “trickle down.” The country is one of the poorest in the world. In terms of decent human conditions of life, out of 189 countries studied, Nigeria ranked 157 (Nwoke 2020: 155). Thus, long-term inequality seems to have intensified with greater prosperity in Nigeria.

To this day, Port Harcourt is simultaneously one of the major centers of both industry and poverty in Nigeria. Bloch et al. (2015) put this claim in perspective. In terms of the number of firms, Port Harcourt is the home of 6 percent of all manufacturing industries in Nigeria, making it the fourth highest industrial concentration in the country after Lagos (47 percent), Abuja (7 percent), and Kano (7 percent). In terms of the concentration of technology firms, Port Harcourt ranks third, as it contains 8 percent of such industries. The point to note is that Port Harcourt may have a smaller share than Lagos, but it is the source of the high-value oil industry. Thus, the Onne Oil and Gas Free

Zone and Port Complex, located in Port Harcourt, makes it the only export zone with a total focus on oil and gas. Accordingly, more than 30 oil and gas TNCs are registered in this area of Port Harcourt alone.

Herein lies a major contradiction. The Onne Oil and Gas Free Zone and Port Complex project was developed in 1982, as one of the key symbols of Nigeria's structural adjustment programs (Okwuchukwu 2018: 2–5). Typically praised as one of Africa's most efficient and most profitable ports, proponents claim that it is a testament to the “success” of the “landlord system.” Under that structure, the state gives land to private interests to develop industries and, in turn, to develop communities through modernization of the Port Harcourt city economy (Pinwa 1999). Through agglomeration economies, the concentration of various complementary oil and gas industries in one location has driven up efficiencies and profitability. However, the cost of doing so has been extreme. Members of communities that were dispossessed of their land for the port facility remain unemployed, impoverished, and hopeless. The private beneficiaries do not appreciate how entire communities—the Onne and Ogu communities—lost their livelihoods as a result of the Onne Oil and Gas Free Zone Port Complex (Okwuchukwu 2018: 2–5). As a free zone, the private entities operating the port facilities pay few, if any, taxes or duties, and they have virtually no obligations about how to use their capital or profit, even if they continue to experience remarkable growth (Pinwa 1999). The landlord model, an apparent symbol of progress, is also the epitome of poverty.

The entire process of petroleum extraction, refinery, and consumption has generated rents that have accrued to the propertied classes of Port Harcourt, while condemning many residents of the city to land insecurity, housing problems, and mass poverty. This “crime of poverty,” as Henry George called the division between the rent-paying many and the rent-collecting few, also creates serious social costs.

Social Costs

The interconnections between social deprivation, social stratification, and social costs have been modeled econometrically by Nigerian economists. The ultimate indicator of social cost is loss of life, measured by a low life expectancy. Akintunde et al. (2019) demonstrate

that, between 1980 and 2014, “carbon dioxide emissions, gross capital formation, health expenditure, and unemployment rate were significant in explaining life expectancy in Nigeria [which is only 54 years].”

According to Kapp ([1950] 1971: vii), such social costs can be considered the damages caused by an enterprise that are borne largely by third parties and future generations that are not the primary beneficiaries of the enterprise. Such social costs can have microeconomic foundations but, ultimately, they are not entirely driven by such causal processes. Thus, although an oil spill might arise from a leakage from the vessel of one oil company, the resulting social cost is the result of a wide range of events and processes.

This theory of causation is much broader than the narrow, technical approaches discussed under the rubric of the so-called resource curse, which focuses on individual events and ignores systemic factors. Conventional economic remedies emphasize end-of-pipe *effects*, and, hence, seek to redress social costs through the use of market instruments that presuppose causal factors that are separable. Kapp’s holistic approach to social costs, on the other hand, is more *social* and, hence, more *environmental*. Here, the environment is not just “out there,” it is part of the social. Causes are seen as both cumulative and self-reinforcing (Kapp [1950] 1971: xiv).

From this perspective, the social costs of disfiguring the land and poisoning the air in Port Harcourt are quite severe. Once celebrated as a “Garden City,” Port Harcourt is now a massively polluted city in a polluted region.

[As of] 2009, over 11 oil companies in the Niger Delta produced 2.7 million barrels of crude oil each day, flaring about 17 billion cubic meters of associated gas and spewing 2,700 tons of particulates, 160 tons of sulphur oxides, 5,400 tons of carbon monoxide, and 12 and 3.5 million tons of methane and carbon dioxide, respectively. (Sanni et al. 2014: 254)

Indeed, studies comparing the amount of suspended particulate matter in the air for various Nigerian cities show that Port Harcourt is the most polluted, a city where pollution levels exceed WHO permitted thresholds (Yakubu 2018). See also Table 2.

So polluted is the city that black soot hangs over its residents, generating significant online media commentary (Salami 2018). That oil

extraction is the cause of this pervasive black soot in Port Harcourt is clear, but the precise explanation for this problem has been a source of contention. The activities of illegal oil refiners, the burning of oil by legal refiners, the police practice of setting fire to stolen items, and the activities of auto-part dealers have all been named as possible causes (Yakubu 2018). What tends to be overlooked, however, is also perhaps the most serious: TNCs export petroleum to Nigeria and other West African countries that is generally 100 times more sulphurous than what is permitted in Europe (Public Eye 2016: 5). The widespread use of highly sulphuric gasoline from Europe, together with gas flaring, must be considered a major part of the explanation for the social costs of oil in Port Harcourt (Yakubu 2018).

TNCs support the “escape” of elites from gated estates in Port Harcourt to other cities when the former becomes too polluted. That is evidently one way in which gated communities have spread through Nigeria. Elites in Port Harcourt tend to move to Lagos where they develop even more gated estates (Uduku 2010). In turn, they force up rents in Lagos, a process that gives more power to landlords in that city. Tenants, on the other hand, are recurrently evicted in Lagos. Gentrification, then, is spread throughout Nigeria, leading to the reliance on cars for longer and wider commuting.

Port Harcourt is not only a site of oil production but also a major location for oil consumption. The city has a small rail track which is 22 kilometers long (Ede et al. 2011). There is also a wide road network and an ever-growing program for road-building in the city. Examples of road construction include Ada George Phases I and II, Slaughter/Trans Amadi/Rumuobiakani, First Bank/Rumuomasi/Woji Old Aba, Rumuola/Rumuokwuta Road, Trans Amadi, and the flyovers at Ada-George/Airport Road and Agip/Rumueme/Abacha Road (UN-Habitat 2009: 20, fn. 36; Bloch et al. 2015). Urban transport is mainly provided by private cars, whether privately used or offered to the public on a commercial basis. In 1970, there were only 406 cars, but in 1973, the number had increased to 1,733. Around the same time when markets for oil and cars were booming, the number of private mini-buses increased from 631 to 2,942, further augmenting markets on wheels (Izeagu and Salau, 1985; Agbo 2011). In addition, there were about 70,000 motorbike taxis in

Port Harcourt, another indication of the marketization of urban life and its resulting social costs (Ede et al. 2011; Obi 2019a).

The increase in traffic can be attributed to the deregulation of the automobile industry. The National Automotive Policy of 1993 started the process. The privatization of the six state-owned automotive assembly plants marked a decisive shift to the market (Ugwueze et al. 2020). Today, Nigeria produces—or at least assembles—many of its own cars. However, many more of the cars on Nigerian roads are imported. Of the 60,000 cars imported each year, largely from the Global North, only 15 percent are new. So the Global North discards its most environmentally polluting cars to Nigeria (Agbo 2011). In this way, the Global North has become the biggest beneficiary of Nigerian deregulation, not only because it has obtained a free dumping ground but also because it is paid for dumping its waste.

Port Harcourt has become addicted to cars. The city craves more petroleum and petroleum products. It is in this area that the refineries have made their biggest impact on consumption. Although most of Nigeria's oil is exported, in Port Harcourt, a great deal of refining activity is going on. Port Harcourt has two of Nigeria's four refineries. Of the 450,000 barrels-per-stream-day (bpsd) refining capacity in Nigeria, Port Harcourt alone has about half (210,000 bpsd) (Jesuleye et al. 2007: 1339). In 2017, the estimated average aggregate demand for petroleum products in Nigeria was 750,000 bpsd (Ogbuigwe 2018). Of that amount, demand in Port Harcourt alone is about 28 percent. These refineries, collectively called the Port Harcourt Refining Company Ltd., produce petroleum, kerosene, automotive gas oil, and low pour fuel oil.

These petroleum products are used by households not only for cooking but also for powering homes. Nigeria is largely dependent on hydro-electricity; however, power generation is mostly via oil in three respects. First, the hydro plant itself is dependent on oil. Second, the hydro power is unreliable. Ayodeji Olukoju (2004) famously pointed out that the Nigerian National Electric Power Authority, NEPA, is better known in Nigeria by its nickname: "Never Expect Power Always" (NEPA).

The country enjoys a coverage rate of almost 100 percent, which would deceptively imply that it has achieved the goal of universal electrification, at least in the urban areas. However, fewer than 20 percent of households

report having electricity at least most of the time. About 51 percent of households report having electricity occasionally in their dwelling. ... Often, although the electricity supplied to households might be sufficient to power a light bulb, the capacity is not enough to power a fan or refrigerator. (Blimpo and Cosgrove-Davies 2019: 21)

Consequently, petrol-powered generators have become the norm for the wealthy, the most influential Nigerians as well as the political classes. Third, others who are not able to afford petrol, use candles and lanterns, which are also dependent on kerosene, another petrol product. Similar comments apply to industrial purposes for which machines are powered by petrol-supported generators (Olukoju 2004).

Several interests have sustained this consumerism. Transnational oil companies have contributed to it. British Petroleum built the first refinery in Port Harcourt to increase demand for gasoline. As demand typically exceeds what can be supplied locally, a new market for imported petroleum products is created where, again, TNCs dominate in the supply of imported petroleum products. Off the road, they deal in generators, and on the roads, in cars. Currently, the city has some 53 fuel stations (Orupabo and York 2018). With growing influence in the planning of the city, TNCs shape the institutions of urban planning and, hence, the planning of the city in such a way that it is regularly in need of gasoline.

State complicity is often understood as “corruption,” but it often takes the form of subsidizing fuel, underinvesting in public transport, and neglecting the planning of public space and housing. The roll out of formal land title registration is ostensibly to give security of tenure, but in fact it has developed the foundations of a capitalist urban economy, decollectivized land, and, hence, reduced the possibility of collective mobilization against capitalism as a system. “The cost of merely titling land in ... Port Harcourt is about 30 percent of the construction cost” (World Bank 2016: 16). Hence, valuers or assessors have to make similar adjustments for rental values. In turn, private landlords have been major beneficiaries of increasing rents to which they contribute by speculating on land (Izeogu 2018).

The levels of particulate matter in Port Harcourt illustrate how pollution results from increased demand for imports of the dirtiest fuels on the planet. Current estimates show that Port Harcourt is one of the

Table 2

Air Pollution in Port Harcourt Compared to Other Cities, 2020

Average Pollutant Emissions	Port Harcourt (µg/m³)	Beijing (µg/m³)	Accra (µg/m³)	Delhi (µg/m³)	Rio de Janeiro (µg/m³)
PM ₁₀	350	92	112	292	42
PM _{2.5}	175	73	55	143	11
*PM _{2.5} (Regional Averages)	36	-	36	54	13

Delhi classified under Eastern Mediterranean, Port Harcourt and Accra under Africa, and Rio de Janeiro under the Americas. Source for city data: Adapted from SDN (2020: 23). Source for regional averages: WHO (2020).

most polluted cities in the world. Some 50 percent of particulate matter in the city relates to petroleum consumption alone. Hence, the majority of cars in Port Harcourt are seen as transmitters of atmospheric pollution, but they have been fueled in filling stations that sell highly contaminated petrol and diesel (SDN 2020: 16). (See also Table 2.)

This volume of pollution leads to additional consequences. The high sulphur content of fuel in Port Harcourt shapes the quantity of particulate matter in the air. The relationship between these two variables is complex. A counterintuitive mechanism is built into state enforcement actions. State agencies target artisanal fuel production in order to reduce the production of high-sulphur fuel. To achieve that goal, they end up burning confiscated fuel in an open space. The targeting of informal operators seems unfounded as excessive sulphur content has been found in both official and informally produced fuel. The Stakeholder Democracy Network (SDN 2020: 28) explains that the results favor the informal sector:

[O]ur analysis identified higher levels of sulphur in official supplies. ...
[U]sing official diesel increases particulate emissions by an estimated 13% compared to using unofficial products.

The spread of formally registered filling stations in Port Harcourt complicates this picture, as the wider the net of filling stations is cast, the more widespread the problem becomes (SDN 2020: 29). Not all of the problem is internal. There is global complicity, as TNCs supply fuel with excessive sulphur content. But whether globally or nationally, formally or informally produced, the resulting soot in the air is often washed into water bodies to create secondary pollution. The soil becomes another casualty, as other pollutants, including sulphur dioxide and particulate matter seep into it, affecting the quality of food (Abali et al. 2018; SDN 2020).

Usually, planners of the state are blamed for being corrupted, but this diagnosis misses what planners say about the conditions under which they work. More fundamentally, the critique locates the problem only at the local or national level. Both problems are serious enough to alter our analysis. Consider interviews with the planners of Port Harcourt, who show a strong commitment to the sustainability of

the city (Echendu 2020). What planners mean by sustainability varies, but the idea of self-sufficiency, independent growth and change, and the use of land for public purposes are recurrent themes in planners' ideas about sustainability.

Nwozor et al. (2020) show that the state and its agents are not always to be taken at their word, as their deeds may contradict their rhetoric. For instance, after unsuccessfully trying to eliminate the informal economy of oil refineries through force with the support of the Nigerian military, the state and its planners contend that they are now keen to support artisanal oil workers who operate informal refineries. In this alternative approach, they seek to license rather than to destroy informal refineries. However, the process and the cost of licensing are skewed towards powerful mid-range refineries, not the majority of local groups. These mid-range refineries have strong ties to the oil TNCs in Nigeria, too. So, the "alternative" is really a continuation of the status quo.

Similar processes have taken place in other oil cities in Africa. In Nigeria, oil cities include Warri in the Niger Delta area, Eket in Akwa Ibom state, and Kaduna in North Central Nigeria. In Ghana, Sekondi-Takoradi is an example, as is Abidjan in Cote d'Ivoire. In every case, urban economic growth has been contradictory. The concept of a "resource curse" has been used to explain the economic problems and political corruption that accompany oil deposits. However, in the Global South, as systematic research on some of these cities shows, their experiences are not the result of a national resource curse (Obeng-Odoom 2014, 2020a, 2021).

Rather, they reflect the contradictions of a global system in which urban land rent is privately appropriated. In the case of cities in mineral-rich regions, the value of those deposits permeates the process of urban economic development. Unless the value of mineral wealth is shared widely, as was attempted in Nigeria in the 1960s, an oil city just becomes a magnet for those who engage in rent theft. A global land market underpinned by uneven property relations institutionalizes this rent theft. In this system, African oil does not simply fuel industrial processes nationally or, even, regionally. Instead, oil cities in Africa are central to the industrial and commercial interests

of the global order both in historical and contemporary times. The resulting “crime of poverty” and worsening “social costs” require an immediate discussion of land equity.

Just Transition and Land Equity

There is now a consensus that the world must replace fossil fuels. Scholars around the world posit a “just transition” to renewable energy as a panacea. The emphasis is on how “dirty” current production systems are, and how the falling price, rising cost, and growing scarcity make it unprofitable to continue to invest in fossil fuels (Economist 2020b). “Today fossil fuels are the ultimate source of 85% of energy. But this system is dirty” (Economist 2020a).

This way of thinking about the problem shapes the dominant response: the need to support *clean* energy and *cheap, abundant* renewable energy. Coupled with the development of new technologies and advanced drilling techniques, the best oil cities can diversify both within and outside the framework of petroleum production (Obeng-Odoom 2019, 2020b, 2021). In the former case, natural gas producers could switch to oil production and refining, or they could explore new forms of unconventional sources of gas, such as shale. In the latter case, they can also invest in other sources of energy as a hedging strategy (Melosi and Pratt 2014). Much dirtier fossil fuels—notably coal—could also be abandoned, while oil will be more slowly phased out (Economist 2020b). “Unlike natural gas and oil, [coal] is concentrated carbon, and thus it accounts for a staggering 39% of annual emissions of CO₂ from fossil fuels” (Economist 2020b). In all cases, market instruments can play the added role of facilitating uptake of the new energy sources.

Changing coal habits requires not only ending market disincentives, such as removing subsidies from coal pricing formulae, but also using market incentives, such as competitive pricing of renewable energy devices, to further enhance their global uptake (Economist 2020b: 13). Mainstream environmental economics sustains the idea that growth-centrism can be delinked from a “carbon upsurge” (Rosewarne et al. 2014). There is a role for the state in all this: to compensate the banks, companies, local governments, and workers, for whom compensation comes in the form of retraining (Economist 2020b: 13). However,

Kapp ([1950] 1971: xix) argues that microeconomic incentives are ineffective:

This principle of internalization of social costs guides some proposals designed to prevent these costs by such indirect methods of control as the levying of fines on producers who pollute, of penalties according to the volume of effluence, or of offering incentives (e.g., tax reductions or subsidies) to producers in order to induce them not to pollute. ... Such methods may be helpful in specific cases, but as a general rule they are of doubtful value and effectiveness. They seem to be unreliable both as to their efficacy and efficiency; they leave the decision of control to individual units, they are slow to take effect and difficult to administer, and hence their results are uncertain.

The demand for investing in renewable energy sources is growing under the rubric of a “just transition.” U.N. agencies, activists, critical social scientists, liberals, and libertarians are united in their support for the shift from fossil fuels to renewables. They insist on more than *prevention* of more pollution using emissions technologies. They also expect negative emissions technologies (NETS) to *cure or sequester* existing emissions. Emissions technologies and negative emissions technologies are supposed to be complementary (Krupp et al. 2019). However, most of these claims overlook the interconnections between renewables and fossil fuels (Obeng-Odoom 2021). Numerous strategies have been proposed regarding a just transition, but they are centered largely on plans to create “green jobs.” (For a detailed overview and critique of these plans, see Marais et al. [2021].) To date, campaigns to promote a “just transition” are often linked to the circular economy or the bioeconomy. The proponents say little or nothing about a change in land tenure and property relations, focusing instead on land use and behavioral changes. They may also express a desire to make capital more environmentally conscious and to limit or curtail growth, but they fail to analyze the intersections between global stratification, land, and the sustainability crisis.

Those who have raised the land question in Nigeria have strongly advocated individual private landownership. Three arguments have typically been made for this advocacy (Binuomoyo et al. 2012). First, assertions are made that the governors do not effectively utilize the

land. Second, governors have been accused of abusing their power, which is arbitrary in terms of compensation, processes, procedures, and overwhelming support for oil TNCs. A third proposition is that individuals would be better managers of their own land. This logic of privatization informs Nigeria's land registration system. (Mabogunje [2013: 621–652] provides a detailed account in his autobiography.) In the view of those who contend that private landownership is the best answer to the land question, Nigeria is a *developing* country with a vision of becoming *developed*, and thus its land tenure system must *become* like that of the *developed* countries.

This proposed land privatization solution, however, misses the point. The resistance in Port Harcourt seeks concrete alternatives that would transform existing rent theft. With a history as long as rent theft itself, this resistance has become synonymous with urban politics in Port Harcourt.

Two features of this radical resistance demand emphasis, however, because they are relatively new. First, the youth of Port Harcourt are becoming increasingly involved; second, many of the groups are much better organized and much stronger than they used to be (Iwilade 2015). Specialists in the political economy of oil in Nigeria (Obi 2009, 2019a, 2019b; Ogbuigwe 2018) also attribute this growing complexity of radicalism to the braided links between unequal resource control and the need for redistribution.

The experience of Port Harcourt points to a simple conclusion: A just transition from fossil fuels to renewable energy needs to focus more on justice and less on technology. A variety of policies may succeed in reducing dependence on oil and fostering decentralized production. But the underlying problems of historical and continuing inequality, social stratification, and neocolonialism will not be abated. Above all, as the world transitions to economies beyond oil, the importance of land as the site of all production will become more obvious. Cheap fossil fuels made constant mobility possible, which allowed us to ignore the economy of “place” for generations. However, humanity now enters a period that requires us to face the need to treat socio-spatial relations in an ecologically sensitive and equitable fashion by reducing or eliminating rent theft.

Commoning land, including urban space and oil, is one concrete way to address ongoing concerns about rent theft. Doing so could entail the use of a tax on land values to solve the paradox of “progress and poverty” (George [1879] 1935). In practical terms, that economic paradigm entails the socialization of privately appropriated rents from land currently in the possession of the TNCs. Land that is not yet privatized can be collectivized, not in the Marxist sense, but in the Georgist sense of commoning land rents. In this economic model, oil commons could still be drilled but mainly for need and self-sufficiency. Labor need not be saddled with the payment of income taxes for actual clean work done. Instead, by taxing land values, those who currently hold land out of use will be motivated to make it available for economic activity. That will expand the commons and give people much greater access to and control over previously privatized spaces for work, rest, and family time.

In this new society, the scale of drilling oil can be significantly reduced. Here is one strong basis for a “transition to a low-energy future” (Kreps and Cobb 2020: 617). Similarly, commoning urban land would enable the development of greater public and social housing and transport, curb sprawl, gentrification, and put an end to the excessive reliance on private automobiles, motorcycle taxis called *okada*, and the chain of private fuel stations that keeps the wheels of accumulation turning (Obeng-Odoom 2021). Over time, the local industries that assemble vehicles could downscale, as could the large-scale importation of oil. A tax on land values promotes a more compact city, one that makes possible more public transport, pedestrian-friendly streets, and cycling. This vibrant urban economy is one in which the energy mix is diverse and local resources are not simply exported but are mainly used to generate local energy and address local needs.

Such processes of self-sufficiency and low-oil transformation could channel significant oil revenues into state and urban government coffers to build social states with improved state capacity. Those processes could also diversify the economy away from fossil fuels and restructure urban and regional development to prioritize public and social housing. Singapore provides one example of how a modern city can provide both housing and public services from land rents rather than allow that social surplus to be squandered on private luxuries (Haila 2016). Alternatives for greater inclusivity can be considered.

For example, many of the jobs created in the oil cities of the future will also be different. Some have called such employment “green jobs” (Pearce and Stilwell 2008; Stilwell and Primrose 2010; Acey and Culhane 2013; ILO 2014). That sort of employment can be characterized as small scale and often not for profit. It does not threaten the environment but rather enhances it and improves social conditions for labor. These micro industries can flourish because, as Pyke (1992) shows, it is not the size of local industries, but rather their relationships to one another and to society that drive forward and backward linkages and reinforce economy-society-environment relations.

As part of a just transition, existing TNCs will need to follow new standards for production quotas, socially sensitive technologies, and a declining model of oil exports (Adu 2009). Progressively reducing reliance on oil, then, is a key goal for oil cities in Africa. Restructuring cities and regions to be less dependent on oil is a complementary goal. That such demands are made by the majority of Africans who are protesting makes these options politically defensible. Analytically, too, these options are defensible. In the absence of policies that foster the commoning of land, speculation heats up the price of land, expelling the poor and the marginalized to the edges of the city, which are usually served by commercialized transport. By reining in that speculation, communal living becomes not only possible but also encouraged, and cities can be built as commons, not only within but also across African nations in spaces already governed by pan-African legislation.

In this scenario, oil cities will not merely be doing damage control. They will also be contributing to greening the world. Janis Birkeland (2020) argues for a “net-positive design,” in which cities not only reduce their ecological footprint but also contribute to cleaning the world. This idea can more compellingly be made when urban land is treated as a commons. Not only biodiversity, but also soil health can be restored. Habitat creation can also flourish and be institutionalized, along with nurturing healthy urban, regional, and global relationships.

None of these resulting consequences could address past wrongs of rent theft. Slavery, for example, has left lasting and ongoing problems of social stratification in Port Harcourt. No amount of commoning can address those problems adequately. Similar comments apply to the loss of fertile lands and biodiversity in general. Past practices

that once made agriculture sustainable are not going to be recovered easily.

Existing mechanisms to address past wrongs are centrally based on “helping” Africa to “adapt” to “climate change.” Negotiated within the U.N. Framework Convention on Climate Change (UNFCCC), they take the form of green aid, which recognizes that the richer countries are more responsible for emissions but that the poorer nations of the Global South, particularly those in Africa, are forced to adapt to the disproportionate effects of climate change. Currently, this compensation is an annual payment of \$100 billion (Adow 2020). Both the rationale and the estimates of such reparations are problematic. They exclude the social costs of slavery. The movements for reparations against slavery, including those championed by the Group of Eminent Persons (GEP) established by the African Union in the 1990s, continue to keep the demand for slavery-related reparations alive (Howard-Hassmann 2004). It is significant that the group included J. F. Ade Ajayi and M. K. O. Abiola, both prominent Nigerians, who also put the case for reparations in Nigeria and Africa more widely. Although it has been argued that the committee experienced challenges of strategy, including whether to combine slavery and colonialism as a basis for reparations and whether to work as individuals or as a group, GEP and the wider case for reparations enjoy, to this day, the overwhelming support of Africans in Africa and others elsewhere in the diaspora (Howard-Hassmann 2004). So, the remedy must be carefully and clearly defined.

What must be compensated is rent theft. Historically, the most formidable strategy for addressing the wrongs of slavery has been the triple strategy of apology, reparations, and prevention. For Blacks uprooted and sent to the Americas, that strategy would entail:

1. a formal apology to signify acknowledgment,
2. restitution or compensation in the form of the present value of the promised “40 acres and a mule” (subject to various adjustments), which were never delivered to freed slaves, and
3. steps to prevent further stratification (Darity and Mullen 2020: 2, 261–270).

In Africa, apart from these three elements, socio-ecological debt would also need to be compensated. Any such estimates must take into account context. So, for the entire city of Port Harcourt and the Niger Delta area in Nigeria, the assessment would need to be different. One approach is what I call social opportunity cost. An analyst using this approach would need to envision how the region might have developed if oil rents had been reinvested in Africa instead of being transferred to Europe and elsewhere in the Global North. From that analysis, one might estimate how much money the British government and its transnational corporations, along with other Western powers that benefited from this trade, should pay in reparations.

Three scenarios are possible for Port Harcourt. The first involves a rediscovery of what worked in the past. Izeogu (2018) offers the most optimistic scenario, one in which the state is willing to both entertain and encourage alternative programs. This optimism would mean a reinvention of Nigeria in a process that would see Africa's giant oil producer renewing its original commitment to a developmentalist agenda. After all, what the state did in the past it can do again. Although developmentalism did not have any carefully developed green commitment, that could presumably be remedied, along with a strong commitment to social inclusion.

A second scenario, which involves fulfilling U.N. goals, is bleak because it does nothing to increase the sharing of wealth. Rent theft has both local and global champions who are likely to push back. Western nations and the TNCs headquartered in them typically close ranks and look out for one another. Britain continues to commit itself to cutting emissions at home, but it enters into new arrangements of rent theft to benefit the British fossil fuel TNCs. Similarly, Norway is committed to a greener world, although it is still involved in global petroleum development within the rent theft model. China, India, Japan, and Australia in Australasia are similarly oriented.

As chronicled by Mohamed Adow (2020: 64–66), promises of green reparations have been systematically broken. The 1992 U.N. Conference on Environment and Development in Rio de Janeiro (the “Earth Summit”) concluded with the principle of “common but differentiated responsibilities” to recognize that the world's wealthier nations owe an ecological debt to the poorer nations. The Kyoto

Protocol in 1997 appears to have placed some enforceable claims against the world's elite countries, but at the 2009 U.N. Climate Change Conference in Copenhagen, the wealthy nations prevaricated by failing to commit themselves to actions that they had agreed to take under legally binding treaties in 1992 and 1997. Finally, at the climate meeting in Durban, South Africa in 2011, the wealthier nations closed ranks to push an agenda that would require all nations to be equally responsible for addressing climate change. This amounted to a complete reversal from 1992. This long string of betrayals may have ended in 2015 with the Paris Agreement, which seems to have returned to the intentions of the Earth Summit in 1992. It concluded with a stronger commitment to prevent the rise of temperatures beyond the threshold of 1.5–2.0 °C. In addition, the wealthier nations committed \$100 billion a year to support the poorer nations' fight against climate change by replacing fossil fuels. But it remains hard to judge this commitment, since much of the assistance consists of loans that must be repaid or direct foreign investment under outside control (Adams 2020). Indeed, there is also a significant gap between the \$100-billion-a-year policy to support existing estimates of fair reparations to Africa and the \$100 trillion academic estimate made by D. T. Osabu-Kle (2000: 344–345). Scholars are skeptical about whether such estimates can be honored under the banner of the United Nations, and, even if paid, they question how such a sudden injection of resources would be managed and distributed (Howard-Hassmann 2004; Zouache 2020).

Even under the best of circumstances, which D. T. Osabu-Kle (2000: 346–348) implies would be for Africa to be paid only the annual interest on the \$100 trillion due to it, the U.N. methods of rectifying past wrongs are exceedingly limited. Such approaches restrict the agreed amount of compensation *to a level far below the damage previously caused by slavery, colonialism, and neocolonialism*. U.N. paradigms exclude the idea of rent theft. Like other humanist paradigms, they continue to rely on markets and business as usual to aid the transition. Clearly, both the mainstream and its alternatives appeal to a bioeconomy, renewables, and the circular economy. But one may question how effective these strategies would be, even if they were realized. Even in a “best-case” scenario in terms of technology transfers, or so-called nature-based solutions, rent theft would remain, indeed worsen.

Regardless of the transition to a cleaner world, both the “crime of poverty” and mass “social costs” would become aggravated.

A third scenario is more uncertain, developing features of both the first and the second scenarios. Whichever scenario prevails, however, the status quo is problematic. The existing drive for a cleaner world is inadequate. An alternative, based on the equitable distribution of land and its benefits, offers the most holistic response to the fossil-fuel question.

Conclusion

Addressing urban issues must entail an analysis of urban land rent, as Anne Haila’s life’s work has systematically demonstrated. In extending this lesson and methodology, it is crucial to investigate the question of urban sustainability. Haila recognized this need and, hence, created a course at the University of Helsinki on “The Land Question and Sustainable Urban Development,” currently taught by members of the Helsinki School of Critical Urban Studies.

One way to deepen this legacy, as I have shown here, is to study the energy of cities because it expands the repertoire of sustainability from a dyadic emphasis on socio-spatial relations to a non-divisible triadic study of socio-spatial relations within a wider ecological framework. Transitioning from oil to renewable energy is, therefore, a useful starting point, but it is not simply about producing clean energy. Ending the use of “dirty fossil fuels” will improve life in Port Harcourt, but a cleaner city will allow landlords to charge more rent for housing and commerce. Unless the ongoing problem of rent theft is addressed, the situation will actually worsen for the working class, for others who work in the informal economies, and for those, such as the descendants of slaves, who have had to scavenge rather than work, who work precariously, or who are condemned to degrading and invisible lives elsewhere in society. If cities like Port Harcourt focus on simple symptoms and solutions, they are likely to reproduce extremes of long-term inequality, social stratification, and social costs, even in the context of renewables.

By contrast, reconstructing the problem of how to achieve a just transition by ending land rent theft refocuses the problematic on its deeper causal forces, the “crime of poverty” and “social costs.”

The theft is historical, substantial, and continuously destructive. The Western-dominated slave trade provided a pattern that the oil trade later followed. Both were centered on the social reproduction and private appropriation of rent within a dependent and oppressive system. Because the inherited system is structurally colonial and colonizing, top-down approaches miss the point when they focus on reducing carbon emissions while ignoring the suppressed hopes of those burdened by rent, including workers.

I propose a number of specific remedies that could make possible a just transition to a post-carbon city without preserving the legacy of land rent theft. I emphasize three of them here because they are central to my arguments.

First, cities have the capacity to make land common property, not by dividing it up into equal shares but simply by sharing the land rents in equal measure. This can be done by taxing land values and either distributing the proceeds equally among residents or using the revenue to carry out projects of public benefit.

Second, justice in the transition to a new economy cannot be achieved without rectifying past wrongs by whites that continue to affect Black people in the present. To that end, governments in the Global North will need to apologize, institutionalize reparations, and prevent further injustices.

Third, oil cities need to restructure urban and regional development by socializing oil rents and by using them for socio-ecological purposes.

Those three actions need to be taken in conjunction with the policies proposed by the United Nations to substitute renewable energy for fossil fuels. Together, they can significantly advance efforts to make socio-ecological justice meaningful in oil cities in Africa, beyond just transition.

Acknowledgments

My gratitude to two referees and Dr. Mark Shackleton (University of Helsinki, Finland) for suggestions on periodization, presentation, data interpretation, and theorization.

Note

1. Between 2013 and the first half of 2020, the share of electricity generated by coal in Britain declined from 40 percent to 2 percent (Economist 2020b: 21). This dramatic decline is attributed to initial overuse, the introduction of new technology, the development of new energy sources that were cheaper, and sustained pressure to mitigate the socio-ecological costs of coal (Jevons [1906] 2012; Economist 2020b: 13, 20–22; Obeng-Odoom 2021)

References

- Abali, Happy Wilson, Etebu M. Ongoebi, and Leton G. Tambari. (2018). "Seasonal Particulate Pollution in Port Harcourt Nigeria." *Journal of Environment Pollution and Human Health* 6: 20–25.
- Acey, Charisma S., and Thomas H. Culhane. (2013). "Green Jobs, Livelihoods and the Post-Carbon Economy in African Cities." *Local Environment* 18: 1046–1065.
- Adams, Kevin M. (2020). *Beyond the 100 Billion Dollar Goal for Climate Finance*. Stockholm: Stockholm Environment Institute. <https://www.sei.org/perspectives/beyond-the-100-billion-dollar-goal-for-climate-finance/>
- Adésinà, Jimí. (2012). "Social Policy in a Mineral-Rich Economy: The Case of Nigeria." In *Mineral Rents and the Financing of Social Policy: Opportunities and Challenges*. Ed. Hujo Katja, pp. 285–318. New York: Palgrave Macmillan.
- Adow, Mohamed. (2020). "The Climate Debt: What the West Owes the Rest." *Foreign Affairs* 99: 60–68.
- Adu, George. (2009). "On the Theory of Optimal Depletion of an Exhaustible Resource: The Case of Oil in Ghana." *African Review of Economics and Finance* 1: 40–50.
- Afigbo, Adiele Eberchukwu. (1972). *The Warrant Chiefs: Indirect Rule in Southeastern Nigeria 1891–1929*. London: Longman.
- _____. 2006. *The Abolition of the Slave Trade in Southeastern Nigeria, 1885–1950*. Rochester, NY: University of Rochester Press.
- African Development Bank. (2019). *African Economic Outlook 2019*. Abidjan, Côte d'Ivoire: African Development Bank.
- Agbo, Cornelius. (2011). "A Critical Evaluation of Motor Vehicle Manufacturing in Nigeria." *Nigerian Journal of Technology* 30: 8–16.
- Agbosu, Lennox. (1988). "The Land Use Act and the State of Nigerian Land Law." *Journal of African Law* 32: 1–43.
- Akintunde, Temitope Sade, Anthony Dotun Oladipo, and Rasheed Oyaromade. (2019). "Socioeconomic Determinants of Health Status in Nigeria (1980–2014)." *African Review of Economics and Finance* 11: 365–388.

- Andrews, Nathan, and Pius Siakwah. (2021). *Oil and Development in Ghana: Beyond the Resource Curse*. London: Routledge.
- Archibong, Belinda. (2018). "Historical Origins of Persistent Inequality in Nigeria." *Oxford Development Studies* 46: 325–347.
- Berry, Sara. (1992). "Hegemony on a Shoestring: Indirect Rule and Access to Agricultural Land." *Africa: Journal of the International African Institute* 62: 327–355.
- Bina, Cyrus. (1992). "The Laws of Economic Rent and Property." *American Journal of Economics and Sociology* 51: 187–204.
- Binuomoyo, Yinka Kehinde, Johnson B. Ogbewo, Ephraim A. Okoro, and Okechukwu Ukaga. (2012). "Land Reform, Land Rights, and Development Challenges in Nigeria." In *Natural Resources, Conflict, and Sustainable Development: Lessons from the Niger Delta*. Eds. Ukaga Okechukwu, Ukoha O. Ukiwo, and Ibaba Samuel Ibaba, pp. 115–131. London: Routledge.
- Birkeland, Janis. (2020). *Net-Positive Design and Sustainable Urban Development*. New York and London: Routledge.
- Blimpo, Moussa P., and Malcolm, Cosgrove-Davies. (2019). *Electricity Access in Sub-Saharan Africa: Uptake, Reliability, and Complementary Factors for Economic Impact*. Africa Development Forum series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1361-0
- Bloch, Robin, Naji Makarem, Mohammed-Bello Yunusa, Nikolaos Papachristodoulou, and Matthew Crighton. (2015). *Economic Development in Urban Nigeria*. Urbanisation Research Nigeria (URN) Research Report. London: ICF International.
- Chen, Yu-Wen. (2020). "Thoughts on Appropriate Approaches to Studying BRI's Actual Impacts and Limits." In *China's Belt and Road Initiative: Strategic and Economic Impacts on Central Asia, Southeast Asia and Central Eastern Europe*. Eds. Alfred Gerstl and Ute Wallenböck, pp. 43–60. London: Routledge.
- Chete, Louis N., John O. Adeoti, Foluso M. Adeyinka, and Femi Oladapo Ogundele. (2016). "Industrial Policy in Nigeria." In *Manufacturing Transformation: Comparative Studies of Industrial Development in Africa and Emerging Asia*. Eds. Carol Newman, John Page, John Rand, Abebe Shimeles, Måns Söderbom, and Finn Tarp, Chapter 6. Oxford: Oxford University Press.
- Chinwe, Chikwem Francis. (2014). "Political Economy of Fuel Importation and Development of Refineries in Nigeria, 1999–2013." Ph.D. thesis, Department of Political Science. Nsukka: University of Nigeria.
- Cline-Cole, Reginald. (2020). "Bouquets and Brickbats Along the Road to Development Freedom and Sovereignty: Commentary on 'Rethinking the Idea of Independent Development and Self-Reliance in Africa'." *African Review of Economics and Finance* 12: 260–281.

- Cohen, Herman. (2020). *US Policy Toward Africa: Eight Decades of Realpolitik*. Boulder, CO, and London: Lynne Rienner Publishers.
- Collier, Paul. (2009a). *Wars, Guns and Votes: Democracy in Dangerous Place*. London: Bodley Head.
- _____. (2009b). *The Bottom Billion*. Oxford: Oxford University Press.
- Collins, Joe. (2017). "Towards a Socially Significant Theory of Rent." *Geography Research Forum* 37: 148–165.
- Darity, William A. Jr., and Kirsten Mullen. (2020). *From Here to Equality: Reparations for Black Americans in the Twenty-First Century*. Chapel Hill, NC: University of North Carolina Press.
- Denman, Donald R. (1993). *A Half and Half Affair: Chronicles of a Hybrid Don*. London: Churchill Press.
- Echendu, Adaku Jane. (2020). "Urban Planning—'It's All About Sustainability': Urban Planners' Conceptualizations of Sustainable Development in Port Harcourt, Nigeria." *International Journal of Sustainable Development and Planning* 15: 593–601.
- Economist. (2019). "The New Scramble for Africa and How Africans Could Win It." March 9–15: 9, 18–20.
- _____. (2020a). "21st Century Power." September 19–25: 9, 20–22.
- _____. (2020b). "Making Coal History." December 5–11: 13, 20–22.
- Ede, Precious N., Opuenebo B. Owei, and Chimbiko Iche Akarolo. (2011). *Does the Greater Port Harcourt Master Plan 2008 Meet Aspirations for Liveable City?* 47th ISOCARP Congress. The Hague: International Society of City and Regional Planners.
- Edozie, Rita Kiki. (2017). *"Pan" Africa Rising: The Cultural Political Economy of Nigeria's Afri-Capitalism and South Africa's Ubuntu Business*. New York: Palgrave Macmillan.
- Ekpo, Udo N. (2014). "Nigeria Industrial Policies and Industrial Sector Performance: Analytical Exploration." *IOSR Journal of Economics and Finance* 3: 1–11.
- Feuser, William F. (1986). "Anomy and Beyond: Nigeria's Civil War in Literature." *Présence Africaine* 137/138 (1er et 2e trimestres): 113–151.
- Fine, Ben. (2019). "Marx's Rent Theory Revisited? Landed Property, Nature and Value." *Economy and Society* 48: 450–461.
- Fine, Ben, and Zavareh Rustomjee. (1996). *The Political Economy of South Africa: From Minerals-Energy Complex to Industrialisation*. Boulder, CO: Westview Press.
- Forstater, Matthew. (2005). "Taxation and Primitive Accumulation: The Case of Colonial Africa." *Research in Political Economy* 22: 51–64.
- Gaffney, Mason. (2016). "Nature, Economy, and Equity: Sacred Water, Profane Markets." *American Journal of Economics and Sociology* 75: 1064–1231.
- George, Henry. ([1879] 1935). *Progress and Poverty*. New York: Robert Schalkenbach Foundation.

- _____. (1883a). "Money in Elections." *North American Review* 136: 201–211.
- _____. ([1883b] 1966). *Social Problems*. New York: Robert Schalkenbach Foundation.
- _____. (1885). *The Crime of Poverty*. New York: Robert Schalkenbach Foundation. <http://schalkenbach.org/library/henry-george/hg-speeches/the-crime-of-poverty.html>
- Haila, Anne. (2011). "The Suburban Commons: A Chinese Story." In *Between Utopia and Apocalypse: Essays on Social Theory and Russia*. Ed. Elina Kahla, pp. 103–112. Helsinki: Aleksanteri Institute, University of Helsinki.
- _____. (2016). *Urban Land Rent: Singapore as a Property State*. Chichester, UK: Wiley-Blackwell.
- Howard-Hassmann, Rhoda E. (2004). "Reparations to Africa and the Group of Eminent Persons." *Cahiers d'Études Africaines* XLV(1–2): 81–97.
- International Labor Organization (ILO). (2014). *Green Jobs in Namibia: Opportunities for Job Creation in the Green Economy*. Geneva: ILO.
- Iwilade, Akin. (2014). "Networks of Violence and Becoming: Youth and the Politics of Patronage in Nigeria's Oil-Rich Delta." *Journal of Modern African Studies* 52: 571–595.
- _____. (2015). "Oil, Youth, and Networks of the 'Unconnected' in Nigeria's Niger Delta." *Society and Natural Resources* 28: 1203–1215.
- Izeogu, Chukudu V. (1989). "Urban Development and the Environment in Port Harcourt." *Environment and Urbanization* 1: 59–68.
- _____. (2018). *Problems and Prospects of Urban and Regional Planning in Nigeria: Port Harcourt Metropolis Since 1914*. New York: Page Publishing.
- Izeogu, Chukudu V., and Ademola T. Salau (1985). "Port Harcourt." *Cities* February: 14–23.
- Jaja, Chioma. (2009). "Port Development in Nigeria: Trends and Patterns." *Journal of Transportation Security* 2: 107–119.
- Jesuleye, Olalekan Aquila, Willie O. Siyanbola, Sikiru A. Sanni, and Matthew Ilori Olugbenga. (2007). "Energy Demand Analysis of Port-Harcourt Refinery, Nigeria and its Policy Implications." *Energy Policy* 35: 1338–1345.
- Jevons, William Stanley. ([1906] 2012). *The Coal Question: An Inquiry Concerning the Progress of the Nation, and the Probable Exhaustion of Our Coal-Mines*. London/New York: Forgotten Books/Macmillan and Co., Ltd.
- Kapp, Karl William. ([1950] 1971). *The Social Costs of Private Enterprise*. New York: Shocken Books.
- Kreps, Bart Hawkins, and Clifford W. Cobb. (2020). "Editors' Introduction: Transition to a Low-Energy Future." *American Journal of Economics and Sociology* 79: 617–652.
- Krueger, Anne O. (1974). "The Political Economy of the Rent-Seeking Society." *American Economic Review* 64: 291–303.

- Krupp, Fred, Nathaniel Keohane, and Eric Pooley. (2019). "Less Than Zero. Can Carbon-Removal Technologies Curb Climate Change?" *Foreign Affairs* 98: 142–152.
- Lawanson, Taibat, and Leke Oduwaye. (2014). "Socio-Economic Adaptation Strategies of the Urban Poor in the Lagos Metropolis, Nigeria." *African Review of Economics and Finance* 6: 139–160.
- Mabogunje, Akinlawon Ladipo. (1965). "Urbanization in Nigeria. A Constraint on Economic Development." *Economic Development and Cultural Change* 13(4, Part 1): 413–438.
- _____. (1980). *The Development Process: A Spatial Perspective*. London: Routledge.
- _____. (2013). *A Measure of Grace: The Autobiography of Akinlawon Ladipo Mabogunje*. Ibadan, Nigeria: BookBuilders.
- Marais, Lochner, Philippe Burger, Malene Campbell, Deidre van Rooyen, and Stuart Denoon-Stevens, eds. (2021). *Coal and Energy in Emalableni, South Africa: Considering a Just Transition*. Edinburgh, UK: Edinburgh University Press.
- Meagher, Kate. (2010). *Identity Economics: Social Networks and the Informal Economy in Nigeria*. Suffolk, UK: Woodbridge, James Currey/Ibadan, Nigeria: Heinemann Educational Books.
- Melosi, Martin V., and Joseph A. Pratt. (2014). "The Energy Capital of the World? Oil-Led Development in Twentieth Century Houston." In *Energy Capitals: Local Impact, Global Influence*. Eds. Joseph A. Pratt, Martin V. Melosi, and Kathleen A. Brosnan, pp. 30–57. Pittsburgh, PA: University of Pittsburgh Press.
- Mirowski, Philip. (1989). *More Heat than Light: Economics as Social Physics, Physics as Nature's Economics*. New York: Cambridge University Press.
- Moore, Mick, Prichard Wilson, and Odd-Helge Fjeldstad. (2018). *Taxing Africa: Coercion, Reform and Development*. London: Zed Books.
- Myrdal, Gunnar. (1944). *An American Dilemma: The Negro Problem and Modern Democracy*. New York: Harper.
- Nigerian National Petroleum Corporation (NNPC). (2020). *History of the Nigerian Petroleum Industry*. Abuja: NNPC. <https://nnpcgroup.com/NNPC-Business/Business-Information/Pages/Industry-History.aspx>
- Njoku, O.N. (1981). "Export Production Drive in Nigeria During the Second World War." *Transafrican Journal of History* 10(1/2): 11–27.
- Northrup, David. (1978). *Trade Without Rulers: Pre-Colonial Economic Development in South-Eastern Nigeria*. Oxford: Clarendon Press.
- _____. (2007). "Review of *The Abolition of the Slave Trade in Southeastern Nigeria, 1885–1950*." *African Studies Review* 50(2): 228–229.
- Nwoke, Chibuzo Nnate. (1984a). "The Global Struggle Over Surplus Profit for Mining: A Critical Extension of Marx's Rent Theory." Ph.D. dissertation.

- Denver, CO: Graduate School of International Studies, University of Denver.
- _____. (1984b). "World Mining Rent: An Extension of Marx's Theories." *Review* 8: 29–89. <https://www.jstor.org/stable/40240977>
- _____. (1986). "Towards Authentic Economic Nationalism in Nigeria." *Africa Today* 33: 51–69.
- _____. (2020). "Rethinking the Idea of Independent Development and Self-Reliance in Africa." *African Review of Economics and Finance* 12: 152–170.
- Nwokoro, Immaculata, Taibat Lawanson, Olufunke Ebuehi, Samson Fadare, John Agwu, and Oluwale Soyinka. (2015). "Socioeconomic Dynamics and Environmental Health Outcomes in Informal Settlements of Port Harcourt, Nigeria." *Journal of Construction Project Management and Innovation* 5: 1064–1081.
- Nwozor, Agaptus, John Olanrewaju, Modupe Ake, and Onjefu Okidu. (2020). "Oil and its Discontents: The Political Economy of Artisanal Refining in Nigeria." *Review of African Political Economy*. <https://doi.org/10.1080/03056244.2020.1835631>
- Obeng-Odoom, Franklin. (2010a). "Abnormal Urbanisation in Africa: A Dissenting View." *African Geographical Review* 29: 13–40.
- _____. (2010b). "The Discovery of Oil in Ghana: Is Transparency Sufficient?" *Africa Journal of International Affairs* 13(1–2): 89–119.
- _____. (2014). *Oiling the Urban Economy: Land, Labour, Capital, and the State in Sekondi-Takoradi, Ghana*. London: Routledge.
- _____. (2016). *Reconstructing Urban Economics: Towards a Political Economy of the Built Environment*. London: Zed Books.
- _____. (2018). "Transnational Corporations and Urban Development." *American Journal of Economics and Sociology* 77: 447–510.
- _____. (2019). "Petroleum Accidents in the Global South." *Research in Political Economy* 33: 111–142.
- _____. (2020a). "Governing the Petropolis: From Resource Entrepreneurialism to Resource Commoning." In *The Routledge Handbook of Transformative Global Studies*. Eds. S. A. Hamed Hosseini, James Goodman, Barry Gills, and Sara C. Motta, pp. 569–583. London: Routledge.
- _____. (2020b). *Property, Institutions, and Social Stratification in Africa*. New York and Cambridge, UK: Cambridge University Press.
- _____. (2020c). "The African Continental Free Trade Area." *American Journal of Economics and Sociology* 79: 167–197.
- _____. (2021). *The Commons in an Age of Uncertainty: Decolonizing Nature, Economy, and Society*. Toronto, Canada: University of Toronto Press.
- Obi, Cyril I. (1997). "Globalisation and Local Resistance: The Case of the Ogoni Versus Shell." *New Political Economy* 2: 137–148.

- _____. (2009). "Nigeria's Niger Delta: Understanding the Complex Drivers of Violent Oil-Related Conflict." *Africa Development* XXXIV: 103–128.
- _____. (2010). "African Oil and the Energy Security Calculations of China and India." In *The Rise of China and India in Africa*. Eds. Fantu Cheru and Cyril Obi, pp. 181–192. London: Zed Books.
- _____. (2019a). "China, Oil, and Africa: A New Perspective." *Insight Turkey* 21: 11–23.
- _____. (2019b). "Gunning for Security Governance in a Resource-Rich African State? Interrogating Militarisation in a Democratic Nigeria." *Conflict, Security & Development* 19: 603–621.
- Ogbuigwe, Anthony. (2018). "Refining in Nigeria: History, Challenges and Prospects." *Applied Petrochemical Research* 8: 181–192.
- Ogunsola, Olayinka. (1990). "History of Energy Sources and Their Utilization in Nigeria." *Energy Sources* 12: 181–198.
- Olaniyi, Rasheed Oyewole. (2003). "West African Migrants and Okada (Commercial Motorcycle) Business in Ibadan Since the 1990s." *Ibadan Journal of Humanistic Studies* 23(April): 91–114.
- Okwuchukwu, Mankonjuola Marylin. (2018). "Corporate Social Responsibility and its Impact on Community Restiveness, a Case Study: Port of Onne, Nigeria." *UNCTAD Port Management Series* 5: 2–5.
- Olukoju, Ayodeji. (1996). "Playing the Second Fiddle: The Development of Port Harcourt and its Role in the Nigerian Economy, 1917–1950." *International Journal of Maritime History* viii: 105–131.
- _____. (2004). "'Never Expect Power Always': Electricity Consumers' Response to Monopoly, Corruption and Inefficient Services in Nigeria." *African Affairs* 103: 51–71.
- Orupabo, Sika, and Newton F. York. (2018). "Assessment of Petrol Stations Locations in Port Harcourt, Rivers State, Nigeria Using Geospatial Techniques." *International Journal of Scientific & Engineering Research* 9: 764–775.
- Osabu-Kle, D. T. (2000). "The African Reparation Cry: Rationale, Estimate, Prospects, and Strategies." *Journal of Black Studies* 30: 331–350.
- Pearce, Alicia, and Frank Stilwell. (2008). "'Green Collar' Jobs: Employment Impacts of Climate Change Policies." *Journal of Australian Political Economy* 62(December): 120–138.
- Pinwa, ThankGod Ndidine. (1999). "The Assessment of the Performance of the Landlord Port of Nigeria (Onne Port Complex, Onne)." *World Maritime University Dissertations* 338.
- Pratt, A. Joseph, Martin V. Melosi, and Kathleen A. Brosnan, eds. (2014). *Energy Capitals: Local Impact, Global Influence*. Pittsburgh: University of Pittsburgh Press.
- Public Eye. (2016). *Dirty Diesel: How Swiss Traders Flood Africa with Toxic Fuels*. Lausanne and Zurich: Public Eye.

- Pyke, Frank. (1992). *Industrial Development Through Small-Firm Cooperation: Theory and Practice*. Geneva: International Labor Organization (ILO).
- Rosewarne, Stuart, James Goodman, and Rebecca Pearse. (2014). *Climate Action Upsurge: The Ethnography of Climate Movement Politics*. London: Routledge.
- Salami, T. (2018). "The Strange Black Soot: The City of Port Harcourt and 'The Hanging Black Cloud'." *Medium.com* May 19. <https://medium.com/@eruditetemi/the-strange-black-soot-the-city-of-port-harcourt-and-the-hanging-black-cloud-c32e28a744a0>
- Sanni, Maruf, Oluwatosin G. Oladipo, Ibikunle O. Ogundari, and Titilayo Aladesanni. (2014). "Adopting Latecomers' Strategies for the Development of Renewable Energy Technology in Africa." *African Journal of Science, Technology, Innovation and Development* 6: 253–263.
- Schobert, Harold. (2014). *Energy: The Basics*. London: Routledge.
- Stakeholder Democracy Network (SDN). (2020). *Dirty Fuel: An Analysis of Official and Unofficial Petroleum Products in the Niger Delta*. Port Harcourt, Nigeria and London: SDN.
- Stilwell, Frank, and David Primrose. (2010). "Economic Stimulus and Restructuring: Infrastructure, Green Jobs and Spatial Impacts." *Urban Policy and Research* 28: 5–25.
- Uduku, Ola. (2010). "Lagos: 'Urban Gating' as the Default Condition." In *Gated Communities Social Sustainability in Contemporary and Historical Gated Developments*. Eds. Samer Bagaeen and Ola Uduku, pp. 39–48. London: Routledge.
- Ugwueze, Michael I., Christian C. Ezeibe, and Jonah I. Onuoha. (2020). "The Political Economy of Automobile Development in Nigeria." *Review of African Political Economy* 47: 115–125.
- Ukaga, Okechukwu, Ukoha O. Ukiwo, and Ibaba Samuel Ibaba. eds. (2012). *Natural Resources, Conflict, and Sustainable Development: Lessons from the Niger Delta*. London: Routledge.
- UN-Habitat. (2009). *Evictions and Demolitions in Port-Harcourt: Report of Fact-Finding Mission to Port Harcourt City, Federal Republic of Nigeria*. Nairobi: UN-Habitat.
- Watts, Michael, and Ed Kashi. (2011). "Oil City: Petro-Landscapes and Sustainable Futures." In *African Cities Reader II: Mobilities and Fixtures*. Eds. Ntone Edjabe and Edgar Pieterse, pp. 92–99. Cape Town, South Africa: Chimurenga and African Centre for Cities.
- Wolpe, Howard. (1974). *Urban Politics in Nigeria: A Study of Port Harcourt*. Berkeley, London, Los Angeles: University of California Press.
- World Bank. (2016). *From Oil to Cities: Nigeria's Next Transformation. Directions in Development*. Washington, DC: World Bank.
- World Health Organization (WHO). (2020). "Concentrations of Fine Particulate Matter (PM 2.5)." *Global Health Observatory* (database). <https://www.>

who.int/data/gho/data/indicators/indicator-details/GHO/concentrations-of-fine-particulate-matter-(pm2-5)

Yakubu, Okhumode H. (2018). "Particle (Soot) Pollution in Port Harcourt Rivers State, Nigeria—Double Air Pollution Burden? Understanding and Tackling Potential Environmental Public Health Impacts." *Environments* 5: 1–22.

Zouache, Abdallah. (2020). "From Inequality to Stratification: Obeng-Odoom's Contribution to the Study of Inequality in Africa." *African Review of Economics and Finance* 12: 299–306.